## Methods to Support Green Retrofit



#### Kevin Pomeroy, AICP

Planning Director

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#### Practical

Cost-Effective

COMING JULY 2005!



2005/approximately 400 pages/paperback/color/ISBN 0-87420-937-4 Order #G13 • \$69.95 ULI Members • \$89.95 Retail



#### Techniques

#### **Green Office Buildings**

A Practical Guide to Development

Anne Frej UI.I-the Urban Land Institute

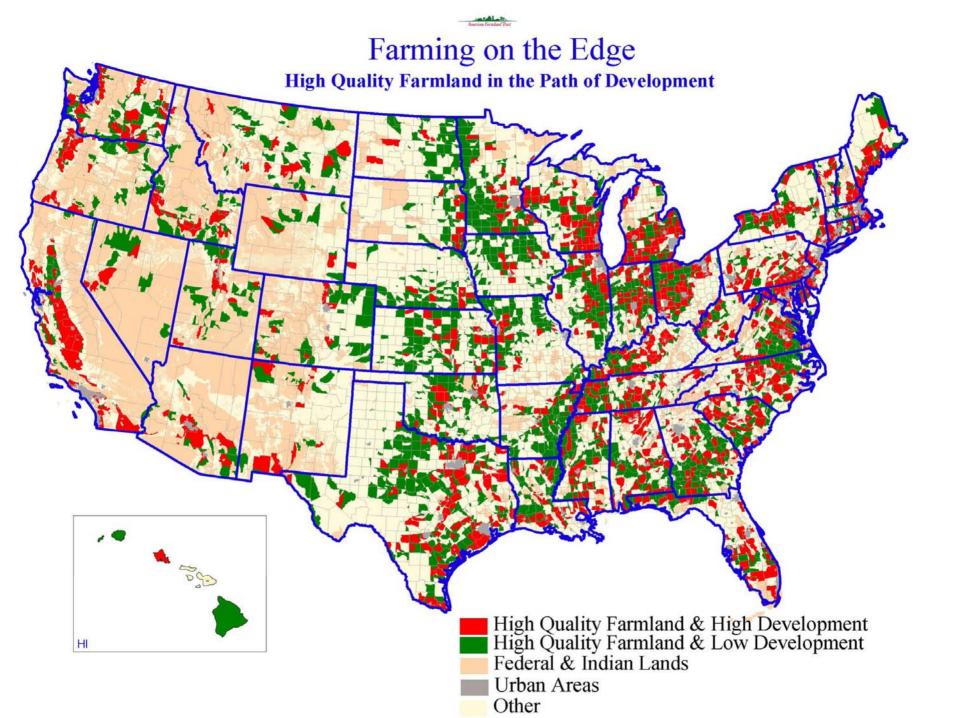
- Explains how-to cost-effectively develop an environmentally sustainable office building.
- · Makes the business case for green buildings
- · Describes the nuts and bolts of sit planning, design, sustainable construction, facilities managemen financing and leasing, government policies, and trends.
- · Includes many examples and 15 detailed case studies of high-performance green office projects in the United States, Europe, and Africa.
- · Packed with color photographs.

Order online at www.bookstore.uli.org or call 800-321-5011



Office Buildings
A Practical Guide to Development



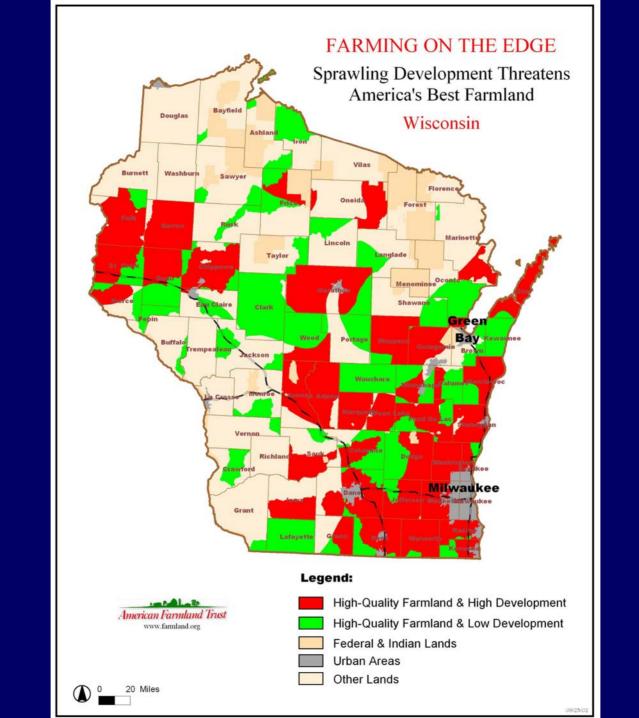


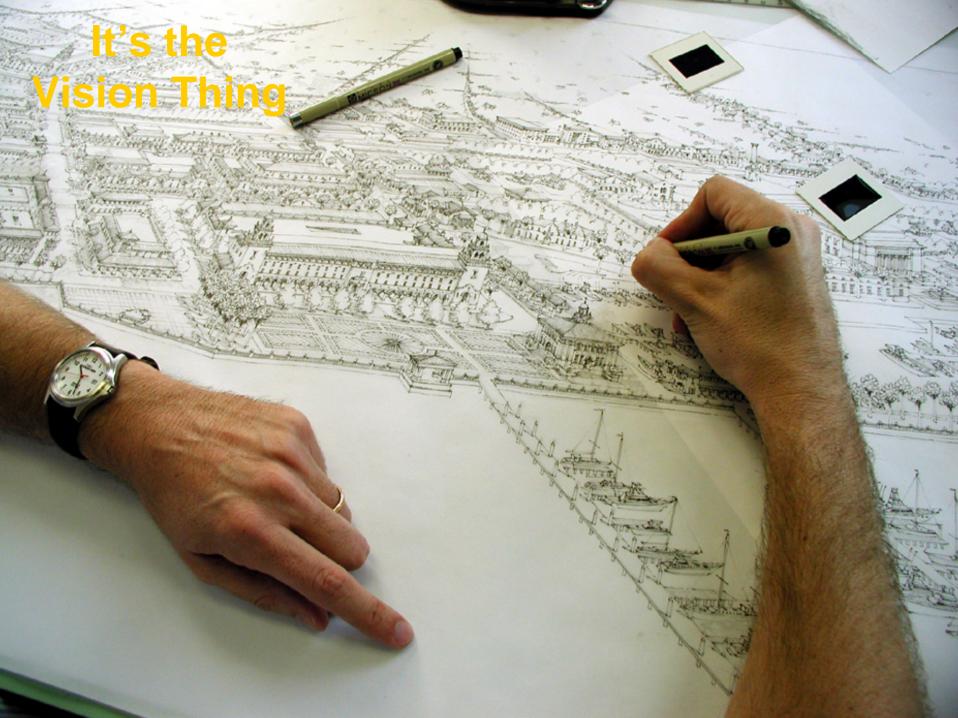
#### FARMING ON THE EDGE

SPRAWLING DEVELOPMENT THREATENS AMERICA'S BEST FARMLAND

#### STATES LOSING THE MOST PRIME FARMLAND 1992-1997

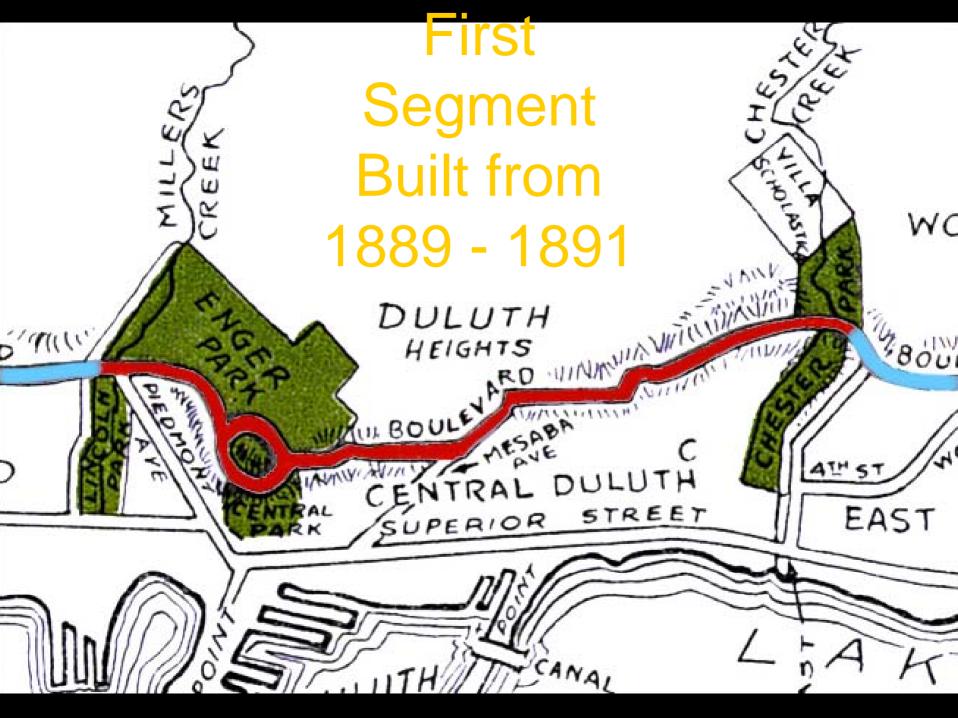
| State | <b>Prime Acres Lost</b> | Increase in Rate of Loss Over Previous 5 Years |
|-------|-------------------------|--|
| TX    | 332,800                 | 42%  |
| ОН    | 212,200                 | 45%  |
| GA    | 184,000                 | 66%  |
| NC    | 168,300                 | 1%   |
| IL    | 160,900                 | 137%   |
| PA    | 134,900                 | 23%  |
| IN    | 124,200                 | 65%  |
| TN    | 124,000                 | 42%  |
| MI    | 121,400                 | 67%  |
| AL    | 113,800                 | 127%   |
| VA    | 105,000                 | 76%  |
| WI    | 91,900                  | 70%  |
| NY    | 89,100                  | 141%   |
| SC    | 86,200                  | 64%  |
| CA    | 85 200                  | 150%   |



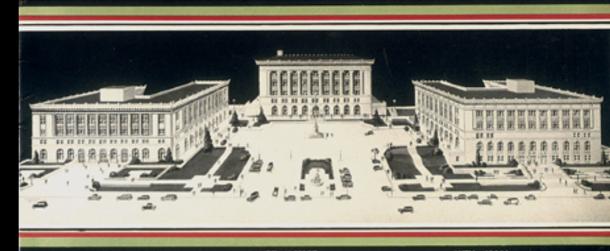


## 1887 - William K Rogers envisions the creation of a hilltop parkway





1907 - Daniel Burnham prepares the plan for the Duluth Civic Center







1930 - The Federal Building, is completed

## 1958 – 2nd Comprehensive Plan is Completed



1983 Vision Forums

Future City - Duluth Tomorrow

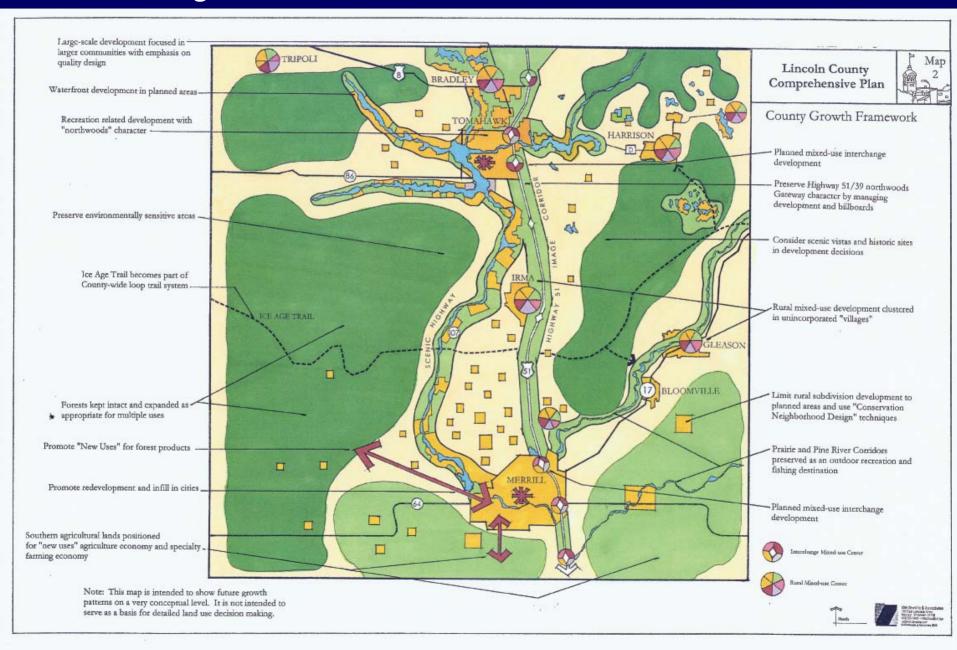


1986 Downtown Waterfront Plan





#### County Growth Framework



## Farmland Protected

## Town of Dunn

2,292.6 Acres17 farms

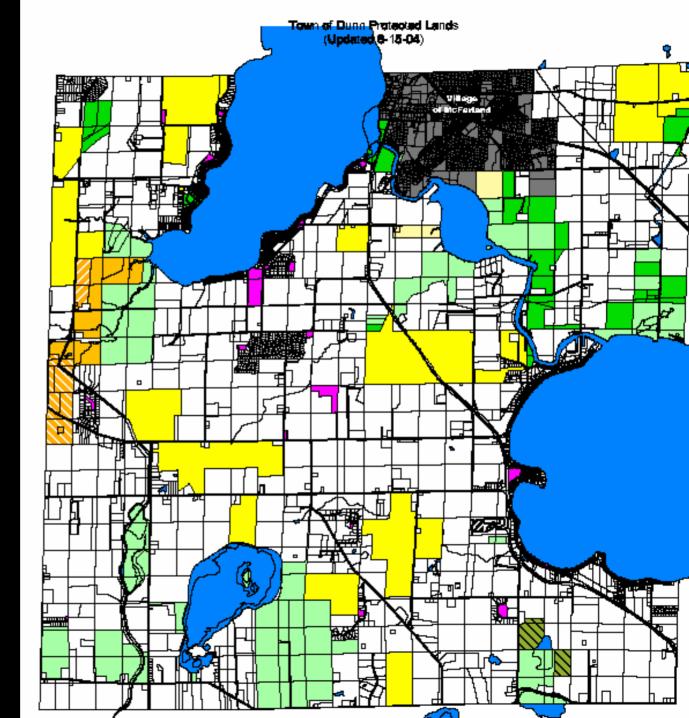
Dunn Conservation Easements
Dane County Parks
MaHupt (501/c)31

MaHunt [501(c)3]

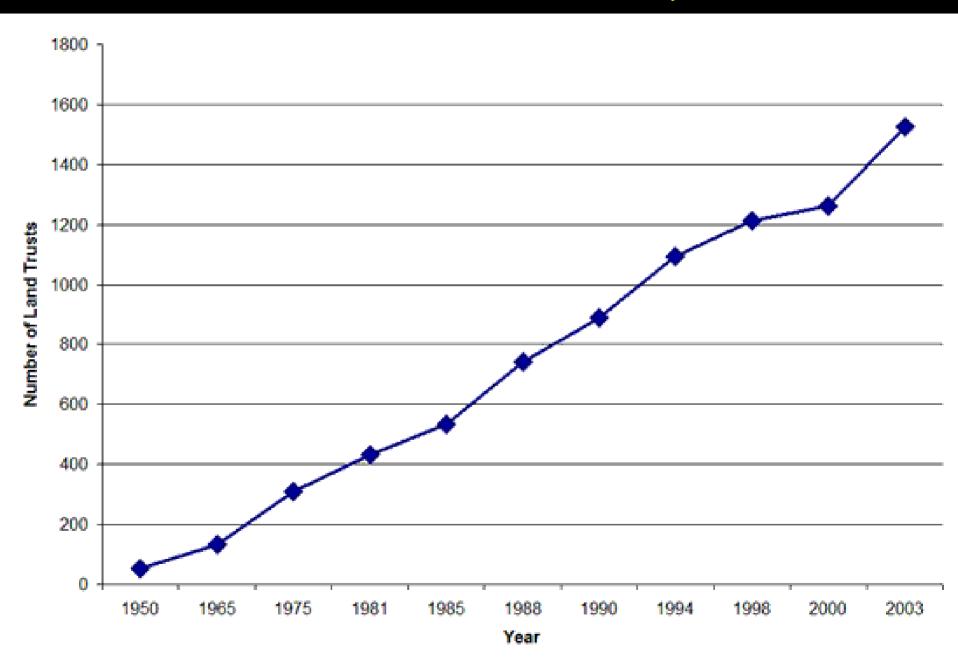
WI DNR

Town Parks

US Fish & Wildlife
Nature Conservancy
TNC Easement
AFT Easement



#### Growth in the Number of Land Trusts, 1950 – 2003

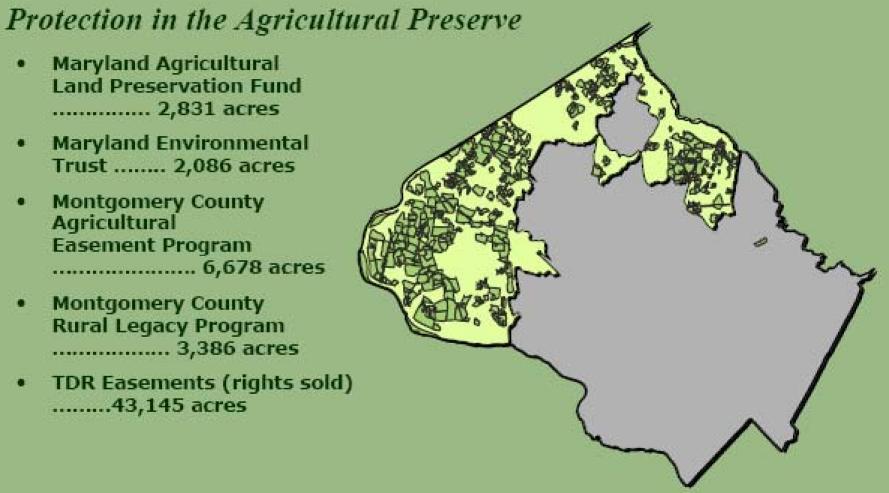




**Maryland Agricultural** Land Preservation Fund ..... 2,831 acres

Maryland Environmental Trust ...... 2,086 acres

- **Montgomery County** Agricultural **Easement Program** ..... 6,678 acres
- **Montgomery County** Rural Legacy Program ...... 3,386 acres
- TDR Easements (rights sold) ......43,145 acres





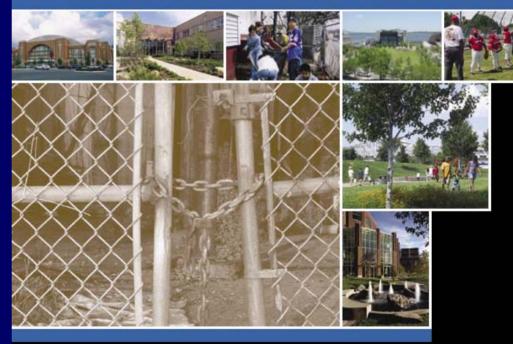
ss news MART THIS SIDE UP PROPERTY OF THE PROPERTY OF TH Upon this site once stood a unique, charming town. Not to mention a lot of trees.

- Strong Team & Leadership
- Connect Brownfields with Community Revitalization
- Begin with the End in Mind
- Involve Citizens
- Engage the Private Sector
- Make Cleanup Work
- Leverage the Funding
- Join Forces with the State
- Partner with Key Federal Agencies
- Take Small StepsToward Progress

### Unlocking

#### **Brownfields**

KEYS TO COMMUNITY REVITALIZATION



National Association of Local Government Environmental Professionals

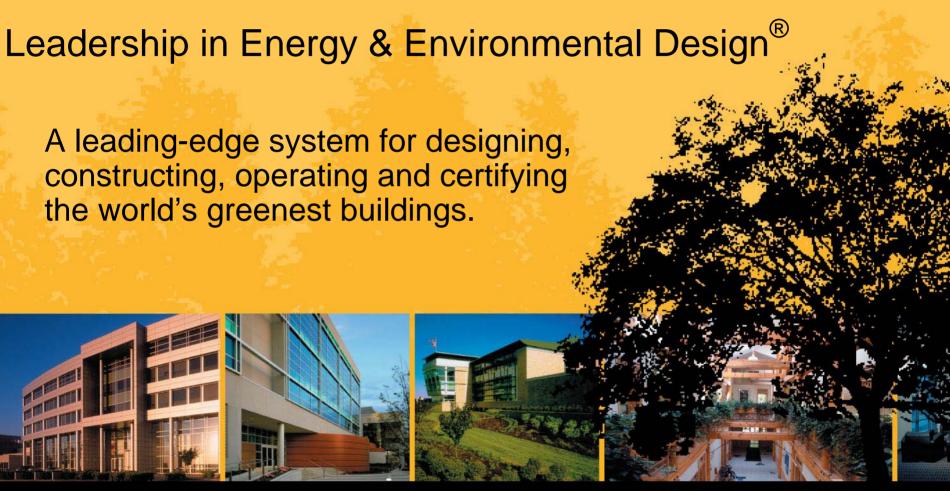
Northeast-Midwest Institute

#### **Environmental Impact of Buildings\***

- 65.2% of total U.S. electricity consumption <sup>1</sup>
- > 36% of total U.S. primary energy use <sup>2</sup>
- 30% of total U.S. greenhouse gas emissions <sup>3</sup>
- 136 million tons of construction and demolition waste in the U.S. (approx. 2.8 lbs/person/day) <sup>4</sup>
- 12% of potable water in the U.S. 5
- 40% (3 billion tons annually) of raw materials use globally <sup>6</sup>

<sup>\*</sup> Commercial and residential



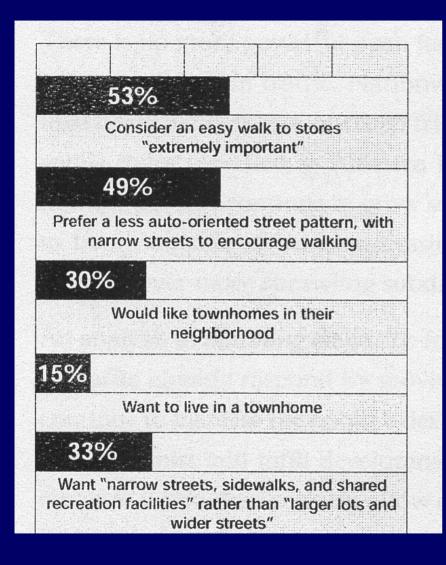


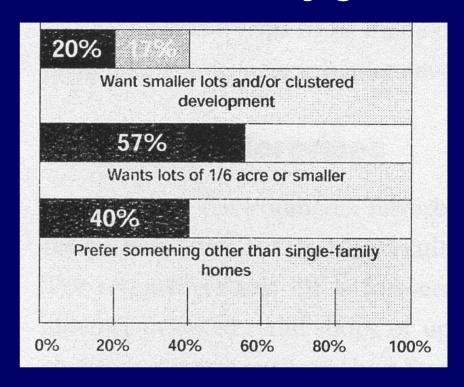
# West Bend Mutual Insurance Company





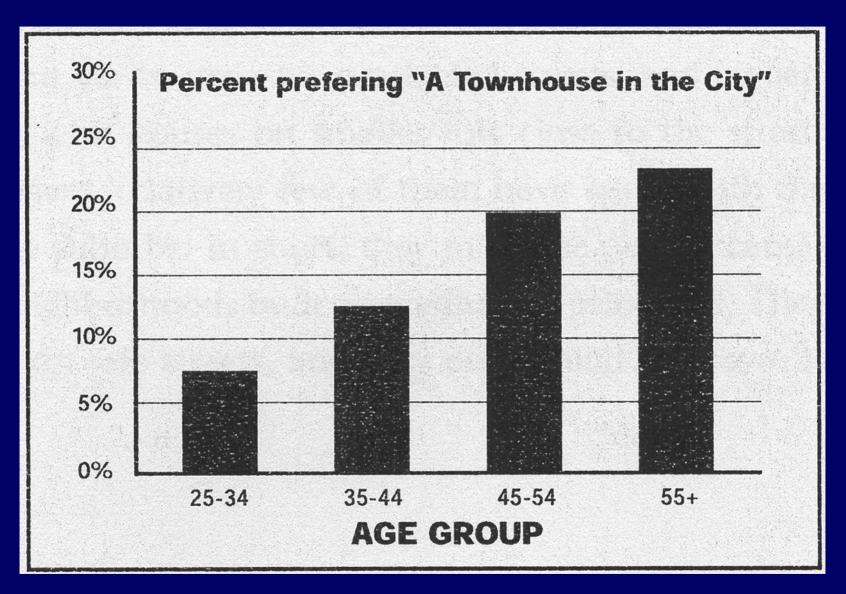
#### "Often what buyers want is NOT what they get"







Source: Fannie Mae Foundation, 2001



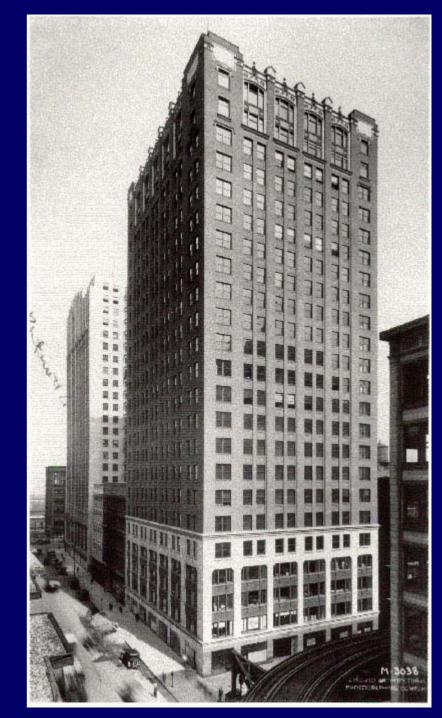
#### Housing Trends

- Downtown housing is one of the fastest growing segments of the US housing market
- Communities of all sizes are experiencing a growing market for downtown housing
- Even cities that have lost population for decades are adding downtown residents
- Downtown housing creates a demand for the 24 hour city and an active night life
- Downtown residents require services and a diverse mix of retail



#### MDA City Apartments

- 1926 Burnham Landmark
- LEED Certified
- Recycled Materials
- Energy Efficient Systems
- Green Roof
- 500 to 2000 sf





#### A floorplan

1 bedroom/1 bath soft loft units 505–2105

unique one bedroom floorplan includes the following world-class features and premium amenities:

soaring 10 foot ceilings

panaramia windows

beautiful hardwood floors, stylish berber carpet

brilliant kitchens with granite islands and contemporary custom cabinets with double basin stainless steel sink

black whirlpool designer appliances, including a frost-free refrigerator with ice maker, quiet cycle distrivasher, self-cleaning range and over-the-range microwave

sexy bothrooms with 36° tub, vessel sinks and ceramic tile floors and walls

large closets with double-hung shelving and wall-mounted shoe rack

individual private storage

four pipe heating and cooling system with personal year-round climate control

full-size washer and dryer

innovative technology "green" building

state-of-the-art telephone, cable and high speed internet technology

peace-of-mind fire protection system

love your life. love your space.

63 e. lake street chicago illinois 60601 telephone [312] 223.0977 fax [312] 223.0978

mdacityapartments.com





- 1910 building vacant for 17 years
- Public/private partnership, TIF, CDBG, Main Street
- Housing and historic tax credits

#### Chippewa Shoe Factory Chippewa Falls, WI

\$1.9 million total project cost

7 – two bedroom units

23 – one bedroom units

2 - efficiencies





## The Phoenix Portage, WI

43 - one and two bedroom apartments for seniors \$250 to \$562 monthly rents 600 to 1070 sq feet





The Whitney Columbus, WI

\$726,000 8 apartments 1st floor commercial



- Columbus residents raised \$103,000 to save the threatened building
- Joint venture with local non-profit and Heartland Affordable Housing
- Housing and historic tax credits



#### **Live Work Units**

- Traditional downtown building type
- Good transition between more intense commercial and residential
- Smallest increment of retail and office
- Good way to sell the dream of entrepreneurship
- Accommodate work at home families
- One mortgage for home and business





Whirligig Art Gallery & Home

Stoughton, WI







Live Work Units Middleton, WI



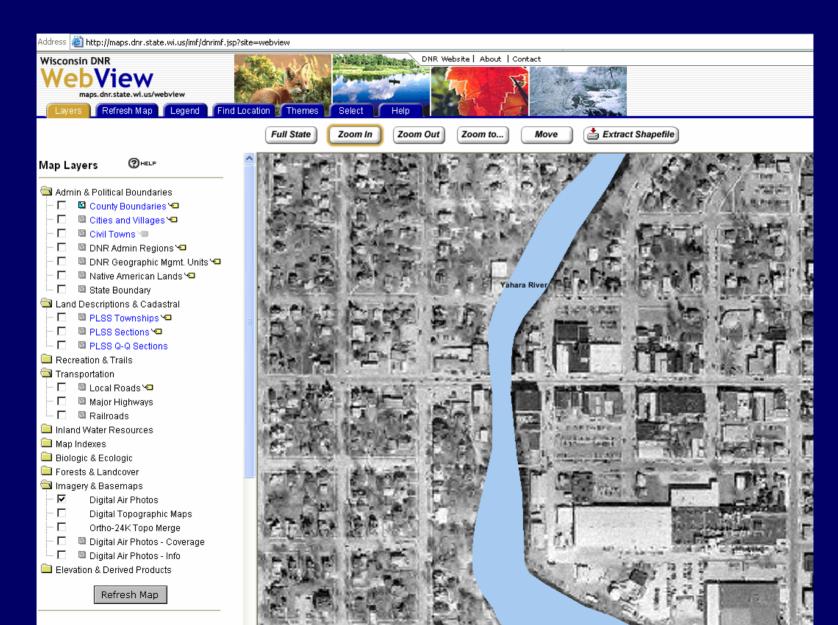


#### Ingredients of Success

- Market analyze the conditions
- Location a site's inherent characteristics and proximity to other locations
- Design not decoration, not style
- Financing creative partnerships
- Entrepreneurs conceive a project when others are unaware of the potential
- Time is strategy appropriate for the long term?



#### Use the Power of Data



## Wisconsin Green Tier

Green Tier is a program that gives responsible companies the flexibility they need to exceed environmental requirements while boosting productivity and cutting costs



## Restorative Development

- Brownfield Remediation
- Infill Development
- Adaptive Reuse
- Historic Preservation
- Infrastructure Renovation
- Wetland Restoration
- Farmland Preservation
- Watershed Renewal



# Methods to Support Green Retrofit



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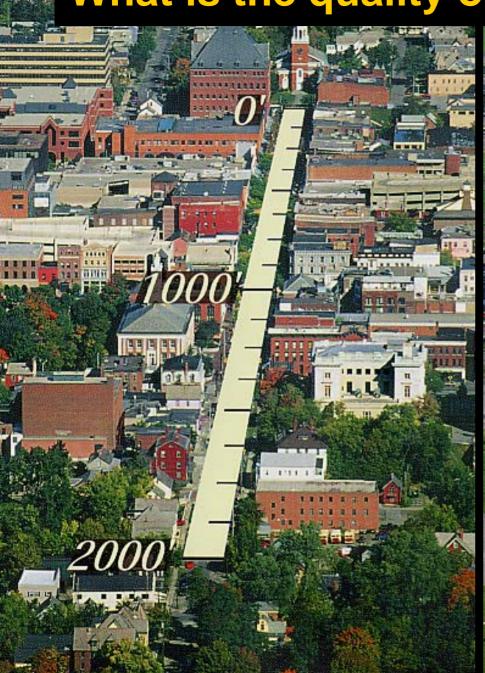
1000 Friends of Wisconsin

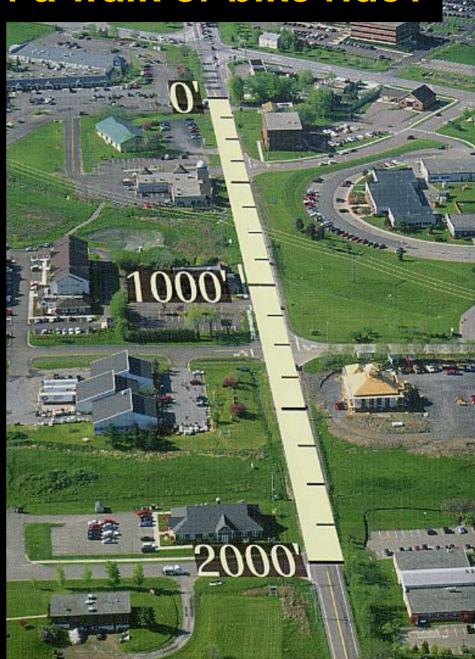


## Low Impact Development

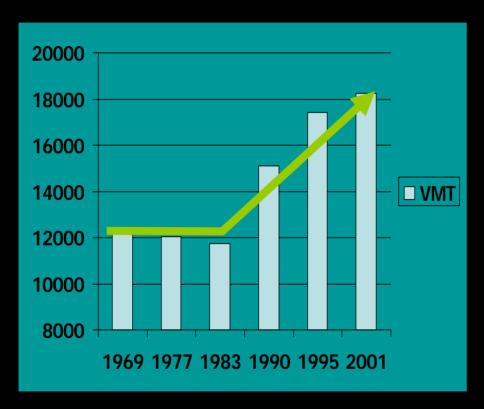
- Provide improved technologies for environmental protection of receiving waters.
- Provide economic incentives that encourage environmentally sensitive development.
- Develop the full potential of environmentally sensitive site planning and design.
- Encourage public education and participation in environmental protection.
- Help build communities based on environmental stewardship.
- Reduce construction and maintenance costs of the stormwater infrastructure.
- Introduce new concepts, technologies, and objectives for stormwater management (bioretention areas, swales, and conservation areas
- Encourage flexibility in regulations that allow innovation in engineering and site planning
- Encourage debate on current stormwater practices and alternative approaches.

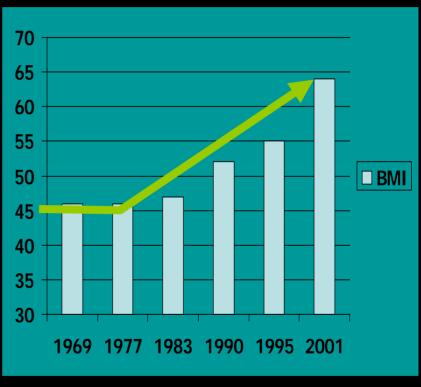
# What is the quality of a walk or bike ride?





# Growth in VMT and % Overweight





50 % overall growth trend of annual household vehicle miles of travel

40 % overall growth trend of overweight Americans



# The Wisconsin Comprehensive Planning Law

- By 2010, communities must adopt a new comprehensive plan. The required elements are:
  - Issues and Opportunities
  - Housing
  - Transportation
  - Utilities and Community Facilities
  - Agricultural, Natural and Cultural Resources
  - Economic Development
  - Intergovernmental Cooperation
  - Land Use
  - Implementation



Volume 1 Number 11



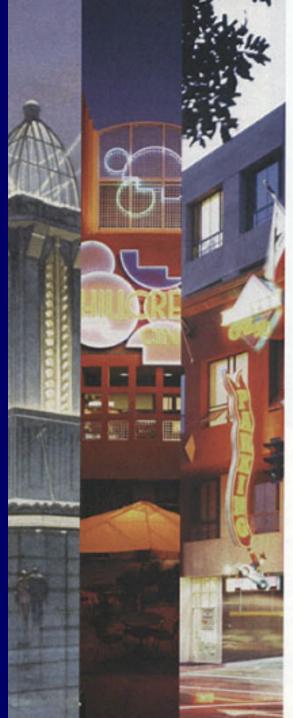
## Concord Pacific Place-Vancouver's downtown waterfront lifestyle

Beach Crescent: Vancouver's chic new neighbourhood on the water's edge,

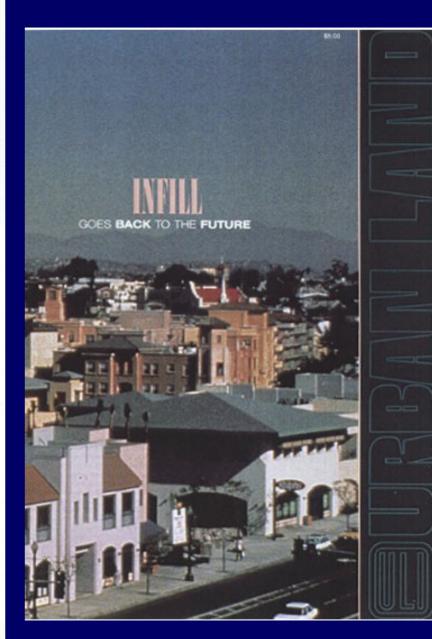
A guide to retail and dining necessities, Costco announces downtown store

& more inside...





URBAN INFILL EXPERIENCE





# Why Is Living Downtown So Attractive?

- Reverse commuting
- Amenities that are not available elsewhere
- Only 1/3 of American households have school age children
- Better access to public transportation
- Wide range of options and price points
- Aging boomers and seniors





- Conversion of a department store into a mixed-use building
- Public/private partnership involving the city, tax increment financing, and private development interests
- Restoration of a historic landmark using historic tax credits

#### **ASQ Center - Downtown Milwaukee**

131-room extended stay hotel 220,000 square feet office space 40,000 square feet retail space.





- Ripon Main Street
   Program purchased the building
- Hundreds of hours of sweat equity
- Unconventional financing with 4 banks

# Pratt Building Ripon, WI

\$120,000 total cost including acquisition Mixed use – apartments and retail



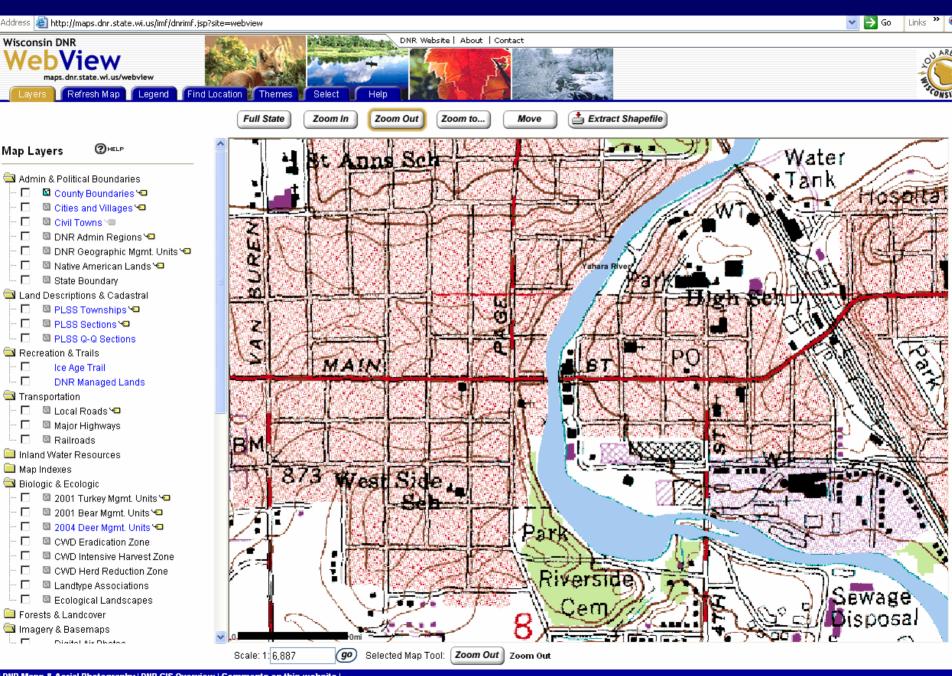
## Benefits of Comprehensive Planning

Coordinates community activity Understand the past and present A roadmap to the future Proactive rather than reactive Save money \$\$\$ **Preserves local control** Preserves local autonomy **Promotes property rights** Promotes economic development Promotes intergovernmental cooperation **Protects resources** 

## Obstacles to Infill, Redevelopment and Mixed Use

- Can cost more than raw land projects
- Policymakers often overlook the public cost savings of infill
- Development community has responded slowly to infill opportunities
- Financing is more difficult
- Existing zoning often prohibits mixed-use developments





# Why Downtown has Long Term Potential for Housing

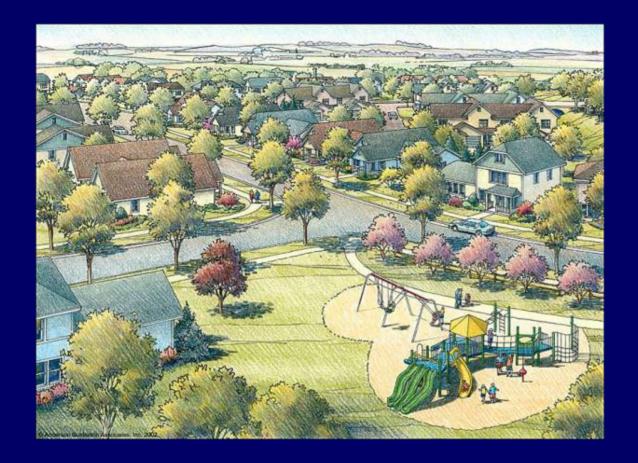
- Downtown is the competitive advantage
- Downtown cannot be duplicated at the mall or on the internet
- Commerce is part of the place
- The return to place is fueled by demographic, economic, technological, and cultural trends



# What can we do to Improve the Climate for Downtown Housing?

- Include planning for residents, housing and mixed-use developments in comprehensive planning and downtown plans
- Audit your development codes
- Encourage design-based planning
- Offer incentives and design assistance
- Support of the community and the neighborhood is critical
- Educate citizens, policymakers and government staff





- Open space and wetlands
- 13 funding sources WI Partnership for Housing Development, County, Fannie Mae, etc.
- Low income housing tax credits

### Uplands - Sun Prairie, WI

103 homes ½ affordable @ 80% of county median income \$106,900 to \$212,900



Companies, communities and government negotiate contracts and charters that are flexible, innovative, efficient and enforceable. Contracts and charters are usually linked to an organization's environmental management system.



HOME

#### AQUATIC AND TERRESTRIAL RESOURCES INVENTORY

#### ATRI Metadata Explorer

Metadata is "data about data", in other words it is any information about the data such as:

- Data originator
- · Time period covered
- Study methodologies or process steps
- Status of development
- · Current contact for data and access methods available to obtain it

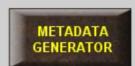
Much more information about metadata is available here.

#### Find Metadata



The Metadata Explorer is a computerized "card catalog" designed to help locate ecological data affecting Wisconsin's landscape. It is primarily composed of data collected by the WDNR, but also contains pertinent data from other sources.

#### Create Metadata



Create basic metadata for your own datasets with the option of submitting it to ATRI. Fill in information for your dataset and view the summarized results. These may be saved as a webpage, copied into a document and/or sent along to ATRI.













- 1. Click on the + icon to the left of each theme to list the subtypes.
- 2. Click on an underlined theme name to return a list of datasets.

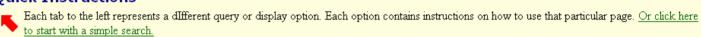
#### Reset Reset All

- Biological Resources
- Physical Resources
- □ Cultural Resources
- Pollution Monitoring
- DNR Research and Monitoring

#### Define Search ✓ Abstracts Preferences

The Inventory Explorer allows you to find and access inventory items. Click on the tabs in the left frame to switch between Explorer tools.

#### **Quick Instructions**



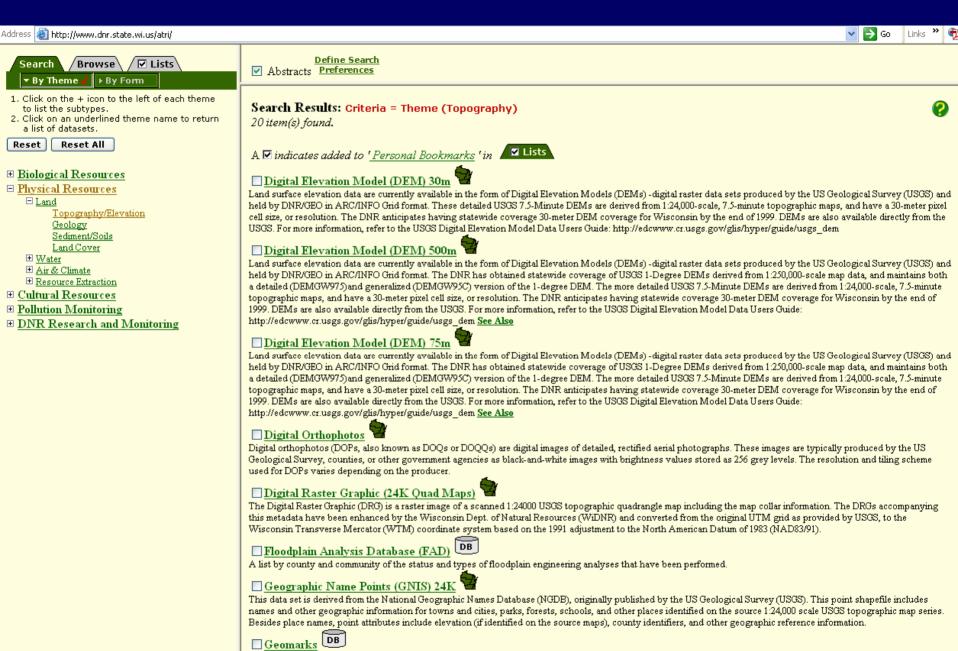
#### **Advanced Search and Browse Instructions**



Use one or more tabs to progressively narrow your search down to items you are most interested in. Only items meeting ALL of your criteria are listed. You can change some or all of the criteria at any time. Results will be displayed in this frame. More query help. Example



Browse lists all items in the inventory alphabetically. Checkmark Lists displays items previously "bookmarked" for various types of use. You can check items yourself to build your own bookmark list. Tell me more about bookmarks.



Database of benchmarks associated with dams and floodplain studies. This information is taken from the paper project files.

Natural Division (Hole & Germain) lines

## Benefits of Green Building

### **Environmental benefits**

Reduce the impacts of natural resource consumption

### **Economic benefits**

Improve the bottom line

### Health and safety benefits

Enhance occupant comfort and health

### Community benefits

 Minimize strain on local infrastructures and improve quality of life